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Investigational Report No. 4

SHARK ATTACK OFF THE EAST COAST OF SOUTH AFRICA, 22nd JANUARY, 1961

by

David H. Davies

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SHARK ATTACK OFF THE EAST COAST OF SOUTH AFRICA, 22 JANUARY 1961

by

DAVID H. DAVIES

A shark attack took place off the Natal South Coast on January 22, 1961. This is the fourth attack since April 1960 when Michael Hely received serious injuries Davies (1960), Campbell *et al* (1960). At the present rate of incidence of shark attack on humans, this section of the east coast of South Africa is one of the most seriously affected areas in the world.

CIRCUMSTANCES OF ATTACK

The attack took place near Amanzimtoti between Inyoni Rocks and the lagoon approximately 17 miles from Durban (see *Fig. 1*).

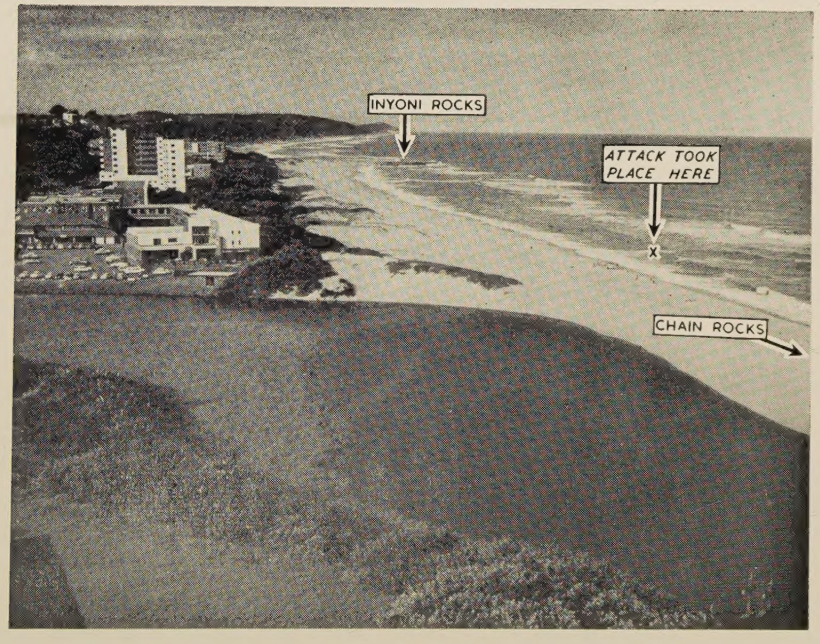

FIG. 1. View of the locality where the Shark Attack took place.

The victim, Michael Murphy, was a schoolboy aged 15 years. The colour of his skin was light and he was wearing swimming trunks coloured red and white.

Murphy was attacked at 2.20 p.m. while swimming approximately 30 feet from the shore in water 6 feet deep. The temperature of the water was 26.1°C and there was extensive discolouration due to flooding of silt-laden rivers after recent rains. The weather at the time was bright and sunny with no wind and the tide was low and incoming.

Murphy and nine other boys were swimming together when they decided to return to the beach. The others swam ashore but the victim remained behind in the water. Within a few minutes Murphy was heard to shout that he had been attacked by a shark. The attack was made on the left leg and the victim struggled violently and drove the shark off. The water became red with blood and the victim saw the dorsal fin of the shark break the surface of the water. Having driven the shark off, he began swimming towards the shore. He was assisted almost immediately by two of the boys on the beach who ran into the water to his aid as soon as they heard his cries.

A tourniquet was applied to the injured leg (see *Fig. 2*) and the victim was placed on the beach in the head-down position where he remained for nearly 30 minutes. During this period a doctor resident in the neighbourhood was called. He set up a venous infusion of dextrose saline and remained in attendance until the ambulance arrived. The victim was then taken to the Addington Hospital in Durban.

On arrival at the hospital, Murphy's condition was good and after shock had been sufficiently overcome he was taken to the theatre.

Description of Wounds

The victim's injuries were confined to the left leg (see *Fig. 2*). A general description of the major wounds based on a report made by Mr. Nigel R. Butcher, the surgeon in charge, is given as follows:

There was a very extensive, deep laceration in the lower third of the thigh on the medial side. The muscles of the quadriceps group and the adductors had been severed through to the bone and, in addition, the femoral artery and vein had been severed cleanly. Three, broad, triangular tooth marks were present on the exposed section of the femur.

On the outer, lower region of the thigh there was an irregular wound which extended through the skin and into the belly of the *vastus lateralis* muscle.

FIG 2. View of inside of Left Leg.

Below the knee on the lateral side there was a deep laceration 1 inch below the head of the fibula which resulted in the severing of the lateral popliteal nerve at this point. Below this laceration were seven slit-like skin wounds caused by individual teeth. On the medial side of the leg there was an extensive laceration approximately 3 inches below the knee joint. This laceration extended through all the muscles laying bare the tibia. Three slender, triangular tooth marks were present on the exposed tibia.

In spite of an initially successful teflon graft between the divided ends of the femoral artery, the victim's leg had to be amputated above the knee, three days later.

It is evident that the shark made only one attack and that the bite was inflicted when the victim's leg was in a flexed position (see *Fig. 2*). Since the degree of flexure of the leg at the time of the attack is not known it was not possible to measure the size of the sweep of the jaws.

The wounds were characterised by the clean-cut nature of the skin edges and muscle tissue. The elongated skin lesions in the inner thigh region (see *Fig. 2*) were doubtless caused by the movement of the points of the teeth when the leg was pulled away. Marks made by the teeth on the skin and on the femur and tibia indicate that the teeth were of the close-set, broad, triangular type.

Conclusion

The characteristics of Murphy's wounds were very similar to those of Petrus Sithole, the African who was fatally injured by a Zambezi River Shark *Carcharinus zambezensis* Peters at Margate in December 1960 Davies and D'Aubrey (1960). It is therefore considered to be highly probable that the species of shark responsible for the attack on Murphy was *Carcharinus zambezensis*.

Acknowledgment

Grateful acknowledgment is made for the funds provided for the survey of the sharks of the Natal region by the Council for Scientific and Industrial Research, Pretoria, South Africa.

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